



Annual operational plan summary 2022-2023



is a joint initiative of



Best Practice





CottonInfo is the Australian cotton industry's extension program: designed to deliver research and development (R&D) outcomes to cotton growers and consultants and increase the adoption of best practice. CottonInfo is an unincorporated joint venture between three cotton industry organisations: Cotton Seed Distributors (CSD), the Cotton Research and Development Corporation (CRDC) and Cotton Australia. In 2021, the Joint Venture partners renewed the Memorandum of Understanding for the program, ensuring the partnership until at least 2025.

CottonInfo connects growers and consultants with the latest R&D to provide stakeholder input into the R&D process and extend information and technology to help achieve best practice. The team comprises Regional Extension Officers (REOs), Technical Leads and the *myBMP* team.

Stakeholder engagement

At a regional level, ongoing coordination between the regional representatives of the partner organisations remains essential. In practice, this will comprise of a twice-yearly regional meeting between REOs, RMs, CSD E&D Agronomist, regional Crop Consultant Australia (CCA) representatives and the local Cotton Grower Association (CGA) chair to share work plans and identify opportunities to coordinate.

CottonInfo Technical Leads will engage with researchers in their technical area and be the point of contact between relevant research organisations and the CottonInfo team.

Communications

The primary objectives of the CottonInfo Communications Strategy are to communicate R&D outcomes and extension information to growers and consultants and encourage adoption, using innovative communication practices and responsive, two-way communication; and to communicate CottonInfo's role as a trusted information source to growers and consultants.

The CottonInfo 2018-23 Strategic Plan contains three strategic goals with supporting key focus areas:



Strategic goal one: Successful adaptation and adoption of research and development

Strategic goal two: Enable successful cotton industry expansion

Strategic goal three: Prepared to respond to biosecurity threats and assist in the event of natural disasters

Our enabling strategies: An effective extension team, and a trusted information source

Building on the 2021-22 AOP

Activities in the 2022-23 AOP that build on 2021-22 activities include:

- Continuing with practical demonstrations of early season retention management. This season will include another round of manual damage treatments of plants in the field to provide visual demonstrations for field days.
- Trials to understand the impact of fallow season optical sprayer residual chemical use on plant-back periods and young cotton plant damage.
- Promoting a second generation silverleaf whitefly (SLW) sampling app, which is expected to include measurement of parasitism.
- Promoting the Sustainability Reporting definition and potential guidelines for soil health.
- Continuing with the four long-term biodiversity monitoring sites that have had a positive management intervention.
- Building on the St George siphonless optimisation trial to extend findings on application efficiency and assess the practicality of performance evaluation.



Integration with research projects

Each year, new CRDC R&D projects are assessed for their suitability to engage with growers and consultants. CottonInfo uses a four point H.A.R.D. assessment of projects to see if they require **help** from the team, should be part of an **awareness** campaign for end users, are a **resource** providing expertise or key knowledge, or if there is a specific regional **demonstration** associated with the project. These projects meet the Strategic Plan target of 30 H.A.R.D. projects integrated into the AOP (★ denotes a new 2022 project). Please contact us if you would like to help us connect with any of these research projects.

D: More Profit from Nitrogen (Schwenke, Baird, Antille)

A: Improving nitrogen use efficiency (Antille)

R: Future Farming phase 2: Improved confidence in targeted N management (Grace)

R: Driver and limitations of practice change for nitrogen management (Welsh)

A: Closing the loop: textile waste composting (Palanisami) ★

A: Validation of soil testing guidelines and critical values for nutrients (McLaren) ★

R: Real time automation for irrigation (Foley)

A: Evaporation mitigation solutions (Qiao)

A: Climate proofing cotton through improved WUE (Sargent) ★

H: Limited Water Decision Support (Dadd)

D: Demonstrating and integrating irrigation technology for cotton (Foley) ★

A: Optimising irrigation performance in bankless systems (Quayle) ★

A: Measuring evapotranspiration from canopy temperature (Kelderman) ★

R: Water productivity benchmarking in the Australian cotton industry ★

A: Building profitable farm systems through increasing soil carbon (McCaffrey)

R: Modern systems agronomy for resilient cotton production (Broughton)

H: Resilient farming systems in irrigated vertisols (Nachimuthu)

A: Science leadership for Northern Australia – supporting the development of cotton in the farming system in Northern Australia (Yeates)

A: SHIFT: Best practice to manage future workforce skills (McDonald)

A: Ensuring best practice is based on science (Cosgrove)

R: Benchmarking soil carbon, soil properties and management of long term trials (Nachimuthu) ★

H: How to attract and retain young people on cotton farms (McDonald) ★

A: Seeking regionally specific guidelines for cover crops (O'Donoghue) ★

R: Supporting southern cotton production systems (Shakeshaft) ★

R: Supporting farming systems adaptation to climate and biological pests (Grundy)

A: Sensors for IPM (McCarthy)

R: Developing proactive approaches to IPM (Heimoana)

R: Improved management of silverleaf whitefly (Sequeira)

H: Novel options for IPM

A: Validation and implementation of new molecular tools for BT resistance monitoring (Downes)

H: Advanced sensing for improved crop protection and field scouting in cotton (McCarthy) ★

H: Improved insecticide resistance monitoring for key pests (Bird) ★

H: Improving insecticide resistance monitoring for SLW (Hopkinson) ★

A: Disease suppressive soils (Smith)

R: Using DNA diagnostics to monitor disease suppressive cotton systems (Long)

A: Improved management of Reniform nematode (Babineau)

R: Innovative solutions for disease (Le)

H: Biological based products for production (Singh)

R: Surveillance and management of cotton diseases in NSW (Le) ★

R: Tactical management and surveillance of Verticillium, Fusarium and recurring wilt (Smith) ★

R: Climate, energy and business analysis (Welsh)

R: Integrated weed management (Koetz)

R: Improved management of weeds in cotton and grains farming systems (Charles)

A: AWM for cropping systems weeds (Llewellyn)

D: Regional demonstration of integrated weed tactics across farming systems (Koetz) ★

R&A: Scientific and CottonInfo Technical lead (Charles) ★

A: Environmental co-benefits of irrigation water (Zivec)

A: Greenhouse gas baseline and mitigation for cotton (Jamali)

A: A scoping study on impact of irrigation infrastructure on native fish (Hutchinson)

A: Evaluating the economic and environmental ROI of modern fish screens (Boys) ★

A: Understanding carbon and biodiversity values - can these values be stacked to achieve multiple outcomes? (Smith) ★

R: Maintain and improve Australian cotton fibre quality (Van der Sluijs)

A: Defoliating cotton in a difficult environment (ICAN)

H: Review of the biosecurity plan for cotton (Plant Health Australia)



CottonInfo AOP 2022-23 - activity summary

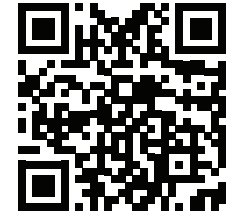
Soil health	Three soil health workshops. Promote Sustainability Reporting soil health criteria.
Nutrition	Continued development of a nitrogen loss warning system using the existing CSD weather network. Nutrition researcher tour of four regions targeting 120 growers and consultants.
Irrigation / water use efficiency	Promote CottonInfo Irrigation Toolbox series via newsletters and Cotton Catchups in November 2022. Head ditch talks to 40 irrigation staff to improve irrigation application efficiency. One irrigation management workshop in the Lachlan to improve irrigation scheduling and water management. Support collection of irrigation information to benchmark water productivity (b/ML). Promote the outcomes of Smarter Irrigation for Profit projects. Irrigation automation demonstrations and grower action learning groups. Siphonless irrigation trial continued at St George to investigate a simple way to know when to shut the water off on a bay to improve irrigation performance.
IPM / AWM	Early season cotton catch-up farm walks in all regions to focus on implications of last season's retention trials. Crop checks published fortnightly during the season in all regions and distributed to consultants, researchers and industry. Continuing on-farm demonstrations of recovery potential from early retention loss in six regions. Promote SLW app. Insect collections to assist with resistance monitoring.
Disease	Organise FUSCOM to provide a platform for sharing current research and identifying priorities for disease research and extension (face to face in September 2022). Participatory research on disease in three regions. This will focus on farm research monitoring and evaluation of disease levels. Continue the verticillium rotation and management trials with CSD and in partnership with the Lower Namoi CGA and QLD DAF in the Macintyre.
Weeds	Regional surveys of the top five resistant weeds in 50 fields to keep awareness of changes in resistance. Three on-farm herbicide option demonstrations with a field day and additional farm walk at each during the season (targeting 75 participants).
Biosecurity	Biosecurity/myBMP Biosecurity Module workshops to develop farm biosecurity plans for 50 growers.
Stewardship	Promotion of stewardship in Bt and of insecticides. REOs have continued involvement in insect resistance monitoring programs. Communication of resistance issues.
Spray drift	Work with spray drift working group. Distribution through CSD reseller network. Support the successful BRIL projects to develop innovative options for eliminating spray drift. Support SOS (Stop Off-Target Spraying) group activities – assisting with comms and awareness. Promote the CRDC GRDC hazardous weather warning system to improve on farm decision making. Awareness and promotion of emerging technology.
NRM	Four long-term biodiversity monitoring sites continued. Sites will be used as case studies for biodiversity communication. 90 growers and consultants participating in NRM extension events. Extension of fish entrainment R&D outcomes to growers. Three biodiversity management field day (kayak trips) in September 2022.
myBMP	Encourage myBMP participation through all extension activities and CottonInfo communication material. All modules reviewed in the 12 months to prioritise updates with Technical Leads. Continue to develop international recognition of the myBMP brand and sustainability. myBMP biosecurity webinar aimed at building the capacity of REOs and CA Regional Managers to enable them to work with growers on managing biosecurity risks.
Industry expansion	Support new growers with resources, farm walks and peer-to-peer learning. Review of myBMP for Northern Australia. Coordinate activities with CSD E&D and Bayer Territory Business Managers.
Fibre quality	Reporting on comparison of spindle vs stripper harvesting on semi-irrigated cotton. Contributing key messages on N impact on fibre quality from analysis of CSIRO N trials. Establish the impact of harvesting and ginning on seed damage and the creation of seedcoat fragment levels.
Energy & business	Work with the Agriculture Innovation Australia Climate Initiative Baselines and Beyond project. A technical area will be selected to develop partial budgets.



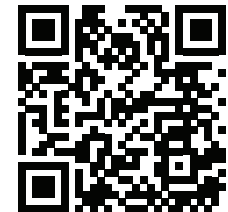
Get involved with CottonInfo



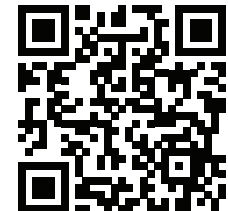
Get to know the CottonInfo team of extension officers and technical experts



Sign up to receive our communications (emails, videos, podcasts, books)



Share information with the industry on any on-farm trials you are involved with



Want to connect with the research? Check out the brief description of the projects we are supporting (pages 18-39) and contact the team to learn more





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